Individuals' willingness to donate GPS data from their smartphone during the COVID-19 crisis: an Amazon Mechanical Turk RCT study with the self-determination theory in mind

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Abstract

This study aims to evaluate people's willingness to donate their historical location data from their smartphone during the COVID-19 pandemic. Participants who were over 18 years of age and owned a smartphone were recruited by Amazon Mechanical Turk an online crowdsourcing platform. Participants were randomized to different frames of motivational messages regarding the donation of their historical location data based on 1) personal benefit, 2) community benefit and 3) monetary award. We also sought to examine the use of a negative versus positive valence in the framing of the different armed messages. 1055 participants were recruited from 41 countries with a mean age of 34 years. Participants living in India or in Brazil were more willing to provide their historical location data compared to those living in the US. No significant differences were seen between positive and negative valence messages. Monetary incentives of $5 significantly increased participants' willingness to provide their historical location data. If participants refused the first framing proposal, they were followed up with a second monetary "bid" proposal. Those in the average "bid" in monetary compensation in the personal gain condition was *$17*, and the average "bid" in the community benefit experimental condition was *$21*. Different methods of framing can be used to influence donations of private smartphone data and public health should encourage the use of financial incentives to retrieve data that can be used to fight the COVID-19 pandemic.

Keyword: smartphone data donation, health communication, behavioral economics, COVID-19